

U.S.S.N. 10,656,986

Claim Amendments

Please amend claims 1, 6, and 14 as follows:

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Listing of Claims

1. (currently amended) A method for exposing a blanket photoresist layer to achieve optimal photoexposure conditions to produce different non-overlapping die patterns comprising:

providing a substrate having formed thereover a photoresist layer; and

exposing within a single die region within the photoresist layer a minimum of two non-overlapping die sub-patterns while employing a minimum of two masks, each of said masks associated with one of said non-overlapping die sub-patterns, each of said non-overlapping die patterns comprising a different pattern complexity, said pattern complexity including orientation and/or shape, each of said non-overlapping die patterns subjected to a different photoexposure condition.

2. (original) The method of claim 1 wherein the substrate is a semiconductor substrate.

3. (original) The method of claim 1 wherein the substrate is a ceramic substrate.

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4. (original) The method of claim 1 wherein the blanket photoresist layer is formed of a positive photoresist material.

5. (original) The method of claim 1 wherein the blanket photoresist layer is formed of a negative photoresist material.

6. (currently amended) A method for exposing a photoresist layer to achieve optimal photoexposure conditions to produce different non-overlapping die patterns comprising:

providing a substrate having formed thereover a photoresist layer; and

exposing within a single die region within the photoresist layer a minimum of two non-overlapping die sub-patterns while employing a minimum of two masks and two exposure conditions, each of said masks associated with one of said non-overlapping die sub-patterns, each of said non-overlapping die patterns comprising a different pattern density and a different pattern complexity, said pattern complexity including orientation and/or shape, each of said non-overlapping die patterns subjected to a different photoexposure condition.

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7. (original) The method of claim 6 wherein the substrate is a semiconductor substrate.

8. (original) The method of claim 6 wherein the substrate is a ceramic substrate.

9. (original) The method of claim 6 wherein the photoresist layer is formed of a positive photoresist material.

10. (original) The method of claim 6 wherein the photoresist layer is formed of a negative photoresist material.

11. (previously presented) The method of claim 6 wherein the photoexposure condition includes exposure energy.

12. (previously presented) The method of claim 6 wherein the photoexposure condition includes depth of focus.

13. (previously presented) The method of claim 6 wherein the photoexposure condition includes illumination.

14. (currently amended) A method for forming a patterned layer to

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achieve optimal photoexposure conditions to produce different non-overlapping die patterns comprising:

providing a substrate having formed thereover a target layer having formed thereover a photoresist layer;

exposing within a single die region within the photoresist layer a minimum of two non-overlapping die sub-patterns while employing a minimum of two masks, to form an exposed photoresist layer, each of said masks associated with one of said non-overlapping die sub-patterns, each of said non-overlapping die patterns comprising a different pattern density and a different pattern complexity, said pattern complexity including orientation and/or shape, each of said non-overlapping die patterns subjected to a different exposure condition;

developing the exposed photoresist layer to form a patterned photoresist layer; and

processing the target layer to form a processed target layer while employing the patterned photoresist layer as a mask layer.

15. (previously presented) The method of claim 14 wherein the

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substrate is a semiconductor substrate.

16. (previously presented) The method of claim 14 wherein the substrate is a ceramic substrate.

17. (previously presented) The method of claim 14 wherein the blanket photoresist layer is formed of a positive photoresist material.

18. (previously presented) The method of claim 14 wherein the blanket photoresist layer is formed of a negative photoresist material.

19. (canceled)

20. (previously presented) The method of claim 14 wherein the different photoexposure condition is selected from the group including exposure energy, depth of focus and illumination.

21. (previously presented) The method of claim 1, wherein each of said non-overlapping die patterns further comprises a different pattern density.